New Investment Proposals

USDA agencies and staff offices that have new investment proposals for BY 2002 that merit being included in the Executive Information Technology Investment Review Boards (EITIRB) executive portfolio should prepare these proposals according to these guidelines. The length and level of detail of this proposal should be commensurate with its magnitude. The goal of an investment proposal is to bring together in one place and at one time all the necessary documents to educate, justify, and support a decision by the EITIRB whether or not to go forward with the investment. We also recommend that a short presentation be prepared that may be given to OCIO or the EITIRB by the functional proponent of the system, when soliciting their approval. We recommend that you use the Business Case section of the proposal or an executive summary of it in this presentation. These proposals should be prepared in final form ready for presentation to OCIO during the Capital Planning and Investment Control review process. Use the mission, risk, return-on-investment, architecture, and security strategic investment criteria and the bonus point for secretarial/administration priority as a guide to developing the proposal as outlined in *Attachment 3*. Documentation in support of this proposal, including the proposal itself should be posted in the I-TIPS Resource Library associated with the investment. Suitable entries in I-TIPS should also be made as outlined elsewhere in this memorandum. Organizationally, the proposal should follow the order presented herein.

The investment proposal should address the following areas:

- **Introduction/Business Case**

The business case should be viewed as your opportunity to "make the case" or justify why the investment should be approved and go forward. It should be compelling and convincing. It should reflect the collective body of work that has gone into preparing the proposal. It should be viewed as your opportunity to "sell" or market the proposal to those who must approve it. The length of the business case should be proportional to its magnitude. Other elements of the new proposal should be incorporated into this section as appropriate. Among the questions that you should strive to answer are:

Why do we need this project/system/initiative?
Why is it important or critical to our mission?
Why is it a good investment?
What are its costs, benefits, and risks?
What are its life-cycle cost, schedule, and performance parameters and expectations?

As an aide to you in constructing a successful business case, the OCIO offers the following outline:

Business Case Outline

Executive Summary
Implications for Mission if Problem/Opportunity is not Addressed
Discussion of the Proposed Solution:
- Nature of the Proposal
- Alternatives Considered
- Contribution to Strategic Goals
- Benefits
- Costs
- Return-On-Investment
- Risks
- Schedule
- Performance Goals and Measures

Sponsorship and Coordination among Stakeholders
Reengineered Business Processes
Program Management and Acquisition Approach
Implications for Other Organizations, Agencies, Department, or Federal Government

- **Mission**

The **Mission** section of the proposal should focus on the relationship of the proposed investment to the mission and programs provided by the Agency and the measures employed to evaluate it. Relevant excerpts from the agency strategic plan or other mission statements should be included as appropriate. Goal statements that address the intended purposes and perceived benefits should be provided. The criticality of the investment to the achievement of the agency mission and programs should also be addressed.

Also within the **Mission** section discuss **Performance Goals/Measures**. The formalized goals for the system should be identified. The specific performance measures and indicators, or other metrics that show how you plan to assess the ability of the proposed investment to provide the planned benefits should be addressed. These should address, cost, schedule, and performance. A description of how these will be collected, monitored, and used to assess the success or failure of the IT investment to attain the goals should be included.

Present the results of scorecards accomplished through I-TIPS.

- **Risk**

Investment risk can be defined as anything that threatens the successful implementation of a project and the realization of the planned benefits. It is those factors for which there is some degree on uncertainty. It is important that these potential areas of risk be teased out, and that a **Risk Management Plan** be developed to address them. This plan documents the procedures that will be used to manage risk throughout the project. Please use a four-step approach to addressing risk, including:

1. Risk identification
2. Risk quantification and analysis
3. Risk evaluation
4. Risk mitigation

Risk identification should identify all the potential areas of uncertainty within the project. Depending upon the type of project, different risk factors may come in to play. There will be some factors that may apply to an in-house developed project, others that may apply to one that is contracted out. Whether the project is using very standardized, uses commercial products, or is custom built may bring other factors into consideration. Here is a short, but not necessarily exhaustive list of some risk factors that could be addressed, considering the specific type of project:

- Technical risk
- Implementation risk
- Strategic/business risk
- Organization/project management risk
- Change management risk
- Human element risk
- Economic/financing risk
- Management risk
- Contract/acquisition risk
- Security risk
- Project cost, size, or resource requirements

Risk quantification and analysis should address the potential quantification of the specific risk and the relative priority impacts of the collective risks. It should also examine both the probability that particular risk will occur, as well as the probable gain or loss that may result.

Risk evaluation should be accomplished through an integrated project team approach to determine if all relevant the risks have been identified, quantified and prioritized. Agreement should be reached among the stakeholders in the overall evaluation of risks.

Risk mitigation should address how to compensate for the risks identified and determine ways to mitigate them. Some strategies that could be used include:

- Risk reduction/avoidance
- Risk protection
- Risk contingency
- Risk acceptance
- Risk transfer

- **Return-On-Investment (ROI) Measures**

Collectively, the Return-On-Investment is a compilation of several quantitative and non-quantitative measures that taken together are indicative of the potential promise and value of an investment. OCIO wants you to employ several discreet measures as outlined below to make a determination of the potential value of an investment.

1. **Net Present Value (NPV)** – Net Present Value is the most commonly used metric for financial evaluations of an investment. This metric recognizes the time value of money by discounting costs and benefits over a life cycle. For each year of the analysis period (life cycle), cash inflows (benefits) and cash outflows (costs) are totaled and then summed to arrive at the net impact. The net cash flow is then multiplied by the discount factor to arrive at a discounted cash flow for each year. NPV is the total of these discounted cash flows over the life cycle. The benefits to cost ratio of the competing alternatives should be computed. Sensitivity analysis on those factors most subject to variability should be performed and analyzed. The **Benefits**-component should detail and quantify the benefits that would accrue to the beneficiaries. The **Costs** component should detail and quantify the costs of alternatives considered for the proposal. These costs should be inclusive of all hardware, software, personnel, etc., including any necessary interfaces or feeder systems. NPV is the method recommended in OMB Circular A-130. OMB Circular A-94 provides the discount rates to be used in the NPV analysis. Use of the Department spreadsheet model, which uses this approach, provides a NPV approach to calculating the costs, benefits, and the **cost/benefit ratio**, is encouraged.

2. **Non-Quantitative Benefits** (Intangibles) – To the extent practicable benefits should be quantified and included in the NPV of costs and benefits. If this is not possible however, another method for assigning importance or relative value to these intangible benefits should be accomplished. The essential question to answer is "How important are these non-quantitative benefits, and how much do they influence the investment decision? This should be done on a life-cycle basis.

3. **Benefits/Cost Analysis** - This analysis balances the estimated NPV benefits against the estimated NPV costs for the alternatives under consideration. Both quantitative and non-quantitative (intangibles) should be addressed. Sensitivity analysis should be conducted on those factors most likely to influence the investment.

4. **Discounted Payback Period** – The Discounted Payback Period is stated in years and equals the amount of time required for the cumulative cash inflow (benefits) to equal the initial and subsequent investments (costs).

5. **Internal Rate of Return** (IRR)- The IRR is the interest rate received for an

investment consisting of cash inflows (benefits) and cash outflows (costs). Please note that the IRR can be easily calculated through the use of a spreadsheet function.

6. **Discounted Simple Return-On-Investment (ROI) –** ROI is stated as a percentage and equals the total discounted returns (benefits minus costs) for the life cycle divided by the discounted cost flows over the life cycle, multiplied by 100. Use of the Department spreadsheet model, which computes this value, is encouraged.

- Supplemental Information:

The 3 "Pesky" questions - First proposed in the Raines Rules these questions are:

1. Does the investment in a major capital asset support core/priority mission functions that need to be performed by the Federal Government?

2. Does it have to be undertaken by the requesting agency because no alternative private sector or government source can more efficiently support the function?

3. Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial, off-the-shelf technology?

Business Process Reengineering - Raines Rules requires that before new systems are fielded that the business process owners simplify or otherwise redesign their existing processes before they invest in new IT to support the process. The results of any work process redesign or BPR activities should be presented.

Requirement Definition and Analysis - Present the documentation of the functional and technical requirements for this system are, as well as the process that was used to develop them. Provide the results of any analysis that was performed. Discuss any architectural considerations addressed.

Independent Verification & Validation - It is the OCIO policy that all major investments contain a plan for I V & V activities at critical junctures of the life cycle. The plan for the use of I V & V activities should be presented. Describe the results of any I V & V's that have been done to date and how they have been used by management.

Project Management - The approach taken for management of the project should be discussed. The manner in which cost, schedule, and performance will be monitored and tracked should be discussed. A chart showing the major milestones throughout the life cycle should be a part of the project management plan. Discuss the use of integrated project teams. Identify the team members.

Architecture - The key design features and the proposed business and technology architectural aspects of the investment should be presented from an end-to-end perspective, including the telecommunications involved. Graphical depictions are helpful here. The proposal should comply with the architecture principles and standards and future architectural direction of the USDA Information Systems

Technology Architecture. See also *Attachment 7*.

Funding - The sources of funding that will support the investment throughout its life cycle should be identified.

Security Analysis & Plan – Prepare an analysis and plan to address the security issues of the proposed investment as outlined in *Attachment 8*.

Acquisition Plan - The procurement or acquisition strategy should be discussed, including the use of modular design, performance based contracts, and the sharing of risk between the Government and the Contractor. The use of pilot projects, phasing, or prototypes should be examined.

Technical Overview

See *Attachment 10* for the informational guideline to this topic.